

El Nido from the air
Photo: Google Earth

THE TOOL: Coastal Protection



WHAT KIND OF TOOL IS IT?

Coastal Protection is a web-based tool which uses a Bayesian Belief Network (BBN).

WHAT ARE THE DIFFERENT PARTS TO IT?

- A PowerPoint introduction to coastal processes
- Coastal Protection Models: User Guide
- The REEFTOP hydrodynamics Bayesian Belief Network (BBN)
- The SHORELINE BBN

Note: There are sub-models for wave height, wave forces, and shoreline position

WHAT DOES IT DO?

Coastal Protection enables users to assess the ability of coral reefs to protect shorelines from coastal erosion, and determine which reefs best protect key coastal infrastructure and communities. This information helps to guide management decisions. The tool also provides information on how wave conditions and wave forces on corals will change with sea level rise or loss of reef elevation, and how the shoreline might recede behind fringing reefs.

HOW DOES IT WORK?

Coastal Protection works through an easy-to-use web-based interface. Users apply the model to coral reefs visible on Google Earth or another GIS system. Using simple measuring tools, such as the width of different reef zones, users will methodically assess which reefs provide the greatest coastal protection.

WHEN IS IT USED?

Coastal Protection is used to identify the most important reefs for coastal protection and resilience as part of marine spatial planning, and as part of planning for climate change adaptation and conservation.

IN WHAT FORMAT IS IT AVAILABLE?

Coastal Protection is available as a web-based BBN via the CCRES portal and via the free version of Netica, (a BBN software tool), with supporting PDF documents.

WHO IS THE TARGET END-USER?

- Government planners undertaking MSP
- NGOs involved in MSP or conservation planning
- Scientists planning for climate change adaptation or interested in coastal resilience

WHAT USER SKILLS ARE REQUIRED?

Undergraduate or higher level degree qualifications are required, and a general ability to use Google Earth or other GIS. Use of the results to make informed decisions to guide management practices or for risk assessment requires some undergraduate level coastal processes knowledge.

WHERE DO YOU ACCESS THE TOOL?

Coastal Protection is accessed via the CCRES website (www.c cres.net).

WHAT IS THE COST OF USING THE TOOL?

Coastal Protection is available free of charge, under the user agreement and stated terms and conditions (see www.c cres.net/terms).

IS TECHNICAL TRAINING OR SUPPORT REQUIRED?

No. The user guide is intended to provide the guidance required.

